#### News

### Budget 2014 full of paradoxes

The 2014–15 Australian Budget tabled by the Treasurer, Joe Hockey, on 13 May 2014 is one of the more unusual budgets I have encountered. It is full of paradoxes and unexplained directions. For example, we are told on the one hand, there is a budget crisis and the government will fix it. On the other hand, we are going to buy fifty-eight more F35 Joint Strike fighter planes (making a total of seventytwo) at a cost of \$12 billion as part of increasing defence spending to 2% of GDP. Yet, no arguments have been made to suggest that we are in any more danger now than we were one year ago, or considerations that drone technology may well overtake the need for most of the reconnaissance roles of the F35s in the not too distant future.

The government is going to scrap the carbon tax, which generates about \$4 billion per year, despite its effectiveness in reducing carbon emissions from electricity generating plants, and that most people are not even aware they are paying this tax. Nearly everybody, however, will feel the increase in petrol excise imposed by the government without the benefit of generating anything like \$4 billion per year. In addition, the Direct Action plan to reduce carbon dioxide emissions where a \$2.55 billion Emissions Reduction Fund, paid for by the taxpayer, will be established to pay the biggest polluters to reduce their carbon emissions - is just another example of an unnecessary expense.

The government is introducing a \$7 copayment charge on everyone who goes to see a GP, has a blood test or an image taken. However, the revenue generated is not going to help in reducing the deficit if it is going towards a new \$20 billion research fund to cure diseases.

It should be noted that the National Health and Medical Research Council (NHMRC) is already set to receive \$1 billion in 2014–15, which is more than the \$905 million allocated for the whole of

| Agency   | Resources<br>2013–14 (\$M) | Resources<br>2014–15 (\$M) |
|--|----------------------------|----------------------------|
| Australian Nuclear Science and Technology Organisation | 314                        | 366                        |
| Australian Research Council                            | 913                        | 905                        |
| Australian Institute of Marine Science                 | 52                         | 62                         |
| Bureau of Meteorology                                  | 346                        | 344                        |
| CSIRO  | 1305                       | 1252                       |
| Geoscience Australia                                   | 135                        | 130                        |
| NHMRC  | 878                        | 1000                       |

the Australian Research Council (ARC). Furthermore, there does not appear to be any new programmes to improve the health of the nation by preventing diseases or tackling chronic life style afflictions. It seems to me that the national research effort is in danger of being distorted in favour of curing rather than preventing. In any case, Australia is unlikely to have the capacity to manufacture or market any new drugs discovered: profits are not likely to return to Australia, but will go to the Pfizers of this world.

The 2014 budget proposes to maintain the savage efficiency dividends (2% per year) on government agencies introduced by the previous Labor government. This is a lazy way of cutting government programs without any proper prioritisation. I would have thought that in this day and age, when we rely so heavily on science and technology, the government science programmes might have been spared or even expanded, but this is not to be.

The table below summarises the resource allocations for the main science agencies, taken from the budget papers.

As you can see ANSTO, AIMS and NHMRC appear to have had their budgets increased, whilst all the others are going backwards. Geoscience Australia has a \$5 million reduction; on top of this will be reductions in external earnings from other government departments, because they cannot afford GA's services.

The other strange announcement in the budget is the allocation of the entire new

infrastructure funding to building more roads, mostly in and around Sydney and Melbourne, where the benefits will probably be only temporary (most new roads in cities seem to become clogged very soon), and in the apparent absence of a national cost benefits analysis.

For me, infrastructure should include a whole range of systems, such as water storage and supply, sewerage systems, waste management, electrical grids and telecommunications; in other words, systems that improve the nation's living conditions. All we seem to be getting are more roads near the major cities – mid-20th century thinking.

For one-tenth of the costs of the roads proposed we could build a National Broadband Network (NBN) to service just about everybody. This would allow more people to work at home or away from the congested cities...but then, that is only my suggestion!



David Denham denham1@iinet.net.au

News

## Update on the Geophysical Survey Progress from the Geological Surveys of Western Australia, South Australia, Northern Territory, Queensland and WA Department of Water (information current on 8 May 2014)

Tables 1–3 show the continuing acquisition of the airborne magnetic, radiometric, gravity and AEM data of the Australian continent respectively. Geoscience Australia (GA) managed all surveys. Select locality maps accompany Tables 1 and 2, shown in Figures 1, 2 and 3 respectively. Further information on these surveys is available from Murray Richardson at GA via email at murray. richardson@ga.gov.au or telephone on (02) 6249 9229.

#### Table 1. Airborne magnetic and radiometric surveys

| Survey name                         | Client | Contractor          | Start<br>flying | Line<br>(km) | Spacing<br>AGL<br>Dir           | Area<br>(km²)  | End flying                       | Final<br>data to<br>GA | Locality<br>diagram<br>( <i>Preview</i> ) | GADDS<br>release |  |
|-------------------------------------|--------|---------------------|-----------------|--------------|---------------------------------|--|----------------------------------|------------------------|---|------------------|--|
| Kalgoorlie East &<br>Kurnalpi North | GSWA   | Thomson<br>Aviation | 5 Aug 13        | 122 000      | 100 m<br>50 m<br>E–W            | Kalgoorlie:<br>11 000; Kurnalpi<br>N: 11 000   | 100%<br>complete at<br>15 Mar 14 | TBA                    | lssue 165<br>(Aug 13)<br>p. 11            | TBA              |  |
| Widgiemooltha<br>North              | GSWA   | UTS<br>Geophysics   | 25 Jul 13       | 92 000       | 100 m<br>50 m<br>E–W            | 8200   | 100%<br>complete at<br>27 Jan 14 | Expected<br>8 May      | lssue 165<br>(Aug 13)<br>p. 11            | TBA              |  |
| Menzies South                       | GSWA   | GPX<br>Surveys      | 28 Nov<br>13    | 92 000       | 100 m<br>50 m<br>E–W            | 8200   | 100%<br>complete at<br>16 Mar 14 | Expected<br>15 May     | lssue 165<br>(Aug 13)<br>p. 11            | TBA              |  |
| Kurnalpi South                      | GSWA   | UTS<br>Geophysics   | 28 Jan 14       | 92 000       | 100 m<br>50 m<br>E–W            | 8200   | 92.0%<br>complete at 4<br>May 14 | TBA                    | lssue 165<br>(Aug 13)<br>p. 11            | TBA              |  |
| Coompana                            | GSSA   | ТВА                 | TBA             | TBA          | Survey<br>design is<br>underway | The proposed survey may cover all or part of Noorina, Wyola, Cook,<br>Coompana, Nullarbor, Ooldea, Maurice, Wells and Birksgate standard<br>1 : 250 000 standard Map Sheets  |                                  |                        |   |                  |  |
| Dunmarra                            | NTGS   | ТВА                 | ТВА             | 102 500      | 400 m<br>80 m<br>N–S            | The Quotation Request was released on 29 April, closing on 15 May. The<br>proposed survey covers the Katherine, Larrimah, Hodgson Downs, Daly<br>Waters, Tanumbirini and Newcastle Waters standard 1 : 250 000 Map<br>Sheets                   |                                  |                        |   |                  |  |
| Yalgoo                              | GSWA   | TBA                 | TBA             | 108 000      | 100/200 m<br>50 m<br>E–W        | The Quotation Request is in preparation by GA. The proposed survey<br>covers the four 1 : 100 000 Map Sheets centred at the common point<br>(117°E, –29°E) of the Yalgoo, Kirkalocka, Perenjori and Ninghan standard<br>1 : 250 000 Map Sheets |                                  |                        |   |                  |  |

See Figures 2 and 3 for the locality maps of the Southern Thomson and Gippsland Basin surveys respectively. TBA, to be advised.

#### Table 2. Gravity surveys

| Survey name  | Client               | Contractor | Start<br>survey | No. of<br>stations   | Station<br>spacing<br>(km)  | Area<br>(km²) | End<br>survey                       | Final data<br>to GA   | Locality GADDS release<br>diagram<br>( <i>Preview</i> )  |
|--|----------------------|------------|-----------------|--|---|---------------|-------------------------------------|---|--|
| WA<br>Reconnaissance<br>Gravity Surveys<br>Stage 3 | GSWA                 | TBA        | TBA             | Approx.<br>53 900<br>in total<br>across 7<br>proposed<br>surveys | 2.5 km<br>regular<br>grid and<br>2 km road<br>traverses           | TBA           | ТВА                                 | The<br>Quotation<br>Request<br>opened on<br>28 Jan 14 and<br>closed on 27<br>Feb 14 | <ol> <li>The proposed surveys are located in:</li> <li>Ngururrpa Region, 1 survey:<br/>Stansmore and surrounds</li> <li>NE Yilgarn, 4 surveys: Herbert-<br/>Rober, Throssel, Sir Samuel and<br/>Wiluna-Nabberu</li> <li>SW Yilgarn, 2 surveys: Perth and<br/>Albany</li> </ol> |
| West Amadeus                                       | NTGS                 | TBA        | TBA             | ТВА  | 4 km<br>regular with<br>areas to be<br>defined for<br>2 km infill | 45 050        | The Qu<br>8 May<br>Rennie<br>Amadeu | otation Request wa<br>The proposed sur<br>e, Bloods Range, Pe<br>s and Mount Liebi  | as released on 23 Apr and closes on<br>vey may cover all or part of Mount<br>etermann Ranges, Ayers Rock, Lake<br>g standard 1 : 250 000 standard Map<br>Sheets  |
| Southern<br>Thomson                                | GA/<br>GSNSW/<br>GSQ | TBA        | TBA             | 3660   | 8 traverses<br>at 333 m<br>station<br>spacing                     | TBA           | The Quot                            | tation Request was  | s released by GA on 2 May and closes<br>on 23 May  |
| Gippsland  | GSV                  | TBA        | ТВА             | 1440   | 12 traverses<br>at 500 m<br>station<br>spacing                    | 8358          | The C                               | Quotation Request<br>closing  | was planned for release on 9 May,<br>three weeks later   |

See Figure 2 for locality of the Gippsland Basin survey. TBA, to be advised.

#### News

#### Table 3. AEM surveys

| Survey<br>name   | Client                       | Contractor                  | Start<br>flying | Line<br>(km)  | Spacing<br>AGL<br>Dir | Area<br>(km²) | End flying                       | Final data to GA  | Locality<br>diagram<br>( <i>Preview</i> ) | GADDS<br>release |
|--|------------------------------|-----------------------------|-----------------|---|-----------------------|---------------|----------------------------------|---|---|------------------|
| Swan/Scott<br>Coastal<br>Plain and<br>Albany/<br>Esperance | WA<br>Department<br>of Water | CGG Aviation<br>(Australia) | 25 Mar 13       | 8607  | 300/600 m             | TBA           | 100%<br>complete to<br>15 May    | Final data to GA<br>20 Jan 14   | lssue 163<br>(Apr 13)<br>p. 17            | TBA              |
| Capricorn<br>Orogen  | GSWA                         | CGG Aviation<br>(Australia) | 19 Oct 13       | 29 697  | 5 km<br>N-S           | 146,300       | 100%<br>complete at<br>9 January | Updated<br>datasets - 28<br>Apr 14  | lssue 166<br>(Oct 13)<br>p. 34            | TBA              |
| Southern<br>Thomson<br>Orogen                              | GA/GSNSW/<br>GSQ             | Geotech<br>Airborne Ltd     | 8 Apr 14        | 4198<br>(3327 in<br>survey<br>and<br>871 in<br>traverses) | 5 km<br>E–W           | 16 270        | 100%<br>complete at<br>5 May     | Additional work<br>(traverses) over<br>the Paroo and<br>Darling Rivers<br>to examine the<br>potential for new<br>groundwater<br>resources is<br>being finalised | lssue 168<br>(Feb 14)<br>p. 24            | ТВА              |

TBA, to be advised.





**Fig. 2.** Locality map outlining the Southern Thomson survey (detailed within Table 2).

BREV

GONG

COOLAE

#### Geophysics in the Surveys

#### News



**Fig. 3.** Locality map outlining the Gippsland Basin survey (detailed within Table 2).





Inverting your data any size any system all 3D:

# **EMVision®**

#### 3D modeling - 3D inversion - 3D migration

Electromagnetic Magnetotelluric Induced Polarization Gravity and Gravity Gradiometry Magnetics and Magnetic Gradiiometry

#### **Airborne - Land - Borehole**

# www.technoimaging.com

emvision@technoimaging.com



4/133 Kelvin Rd, Maddington Western Australia 6109

> PO Box 3215, Lesmurdie Western Australia 6076

p. (08) 9291 7733 f. (08) 9459 3953 e. sales@vortexgeophysics.com.au

# VORTEX GEOPHYSICS